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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,580	11/15/2000	Domingo G. Garcia	TI-28900	3001

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EXAMINER

NGUYEN, DUNG X

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 06/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/713,580

Applicant(s)

GARCIA, DOMINGO G.

Examiner

Dung X Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 7 and 11 - 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3 - 7, 11, and 12 is/are rejected.
- 7) ☒ Claim(s) 2, and 13 - 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Arguments***

1. Applicant's arguments filed on June 04, 2004 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless –*

*(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

3. **Claims 1, 3 – 6, 11, and 12 are rejected** under 35 U.S.C. 102(b) as being anticipated by Gitlin et al. (US patent # 4,334,313).

Regarding claim 1, Gitlin et al. discloses (see column 2, line 31 to column 3, line 34, column 7, lines 19 – 45, and figures 1, 2, 5):

- Tracking a plurality of coefficients in a tracking buffer for timing drift;
- Centering the plurality of coefficients in the tracking buffer;
- Filtering, through equalizers, the digital signal with the plurality of coefficients; and
- Updating the plurality of coefficients in the tracking buffer.

Regarding claims 3 and 4, respectively, the limitations are analyzed in the same manner set forth as claim 1, plus:

- Fractionally spaced equalizer (block 50 of figure 1) for splitting the digital signal into I and Q input signal (column 4, lines 46 – 50);

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Regarding claims 5 and 6, respectively, the limitations are analyzed in the same manner set forth as claim 1, plus:

- Processing circuitry (block 833 of figure 8) corresponding to a buffer manager for tracking the equalizer coefficients within the filter buffer, and for shifting the coefficients within the filter buffer such that the coefficients remain substantially centered within the filter buffer.

Regarding claims 11 and 12, respectively, the limitations are analyzed in the same manner set forth as claim 5, plus:

- A/D converter (block 25 of figure 1) for converting a received analog signal to digital samples.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

5. Claim 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Gitlin et al. (US patent # 4,334,313).

Regarding claim 7, Gitlin et al. differs from the instant claimed invention that it does not state that a system analyzed in claim 5, further comprising: a data tracking buffer for pointing to the portion of the signal stored in the tracking buffer, and a coefficient tracking buffer for pointing to the equalizer coefficients.

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However, as known as every buffer has a pointer for pointing a portion of the signal stored in that buffer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to recognize Gitlin et al. to have a data tracking buffer for pointing to the portion of the signal stored in the tracking buffer, and a coefficient tracking buffer for pointing to the equalizer coefficients for detailing the processing circuitry (block 833 of figure 8).

*Allowable Subject Matter*

6. **Claims 2 and 13 – 15 are objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Contact Information*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung X. Nguyen whose telephone number is (703) 305-4892. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Ghayour Mohammad H. can be reached on (703) 306-3034. The fax phone numbers for this group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.

DXN

June 15, 2004

*Jean B. Corriellus*  
JEAN B. CORRIELUS  
PRIMARY EXAMINER

*6/24/04*